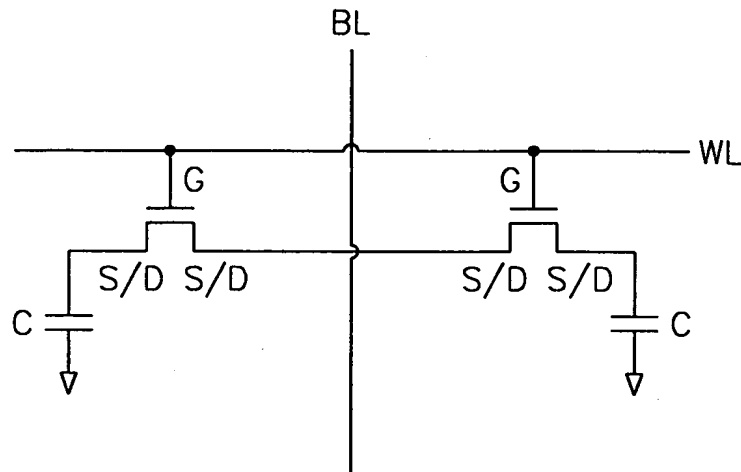


FIG. 1 (PRIOR ART)



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FIG. 2A (PRIOR ART)

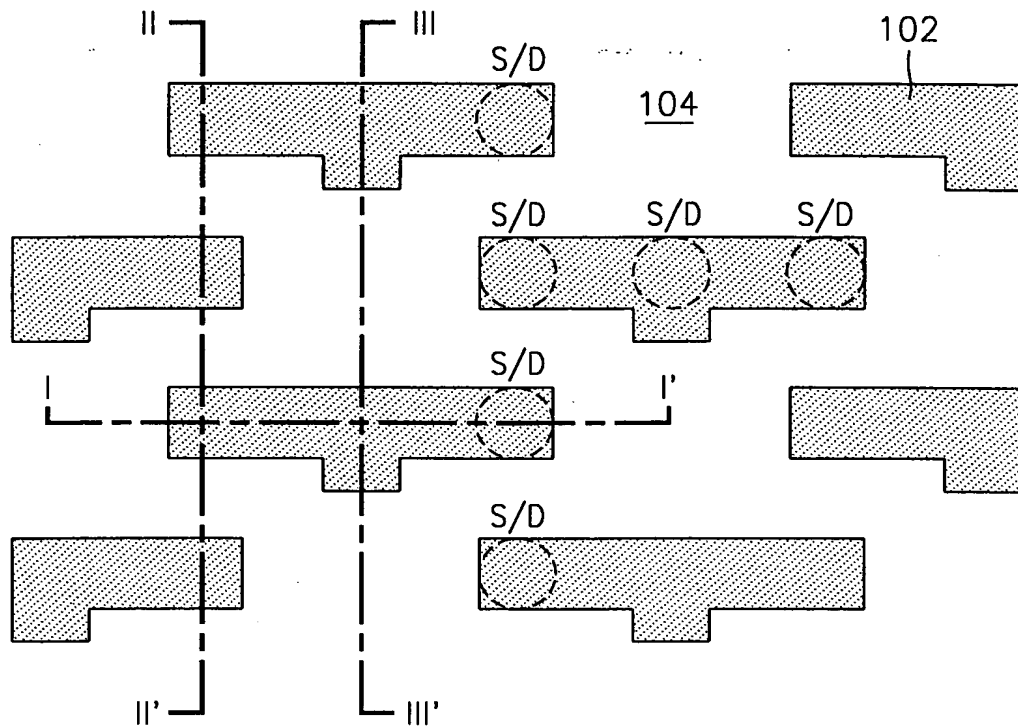


FIG. 2B (PRIOR ART)

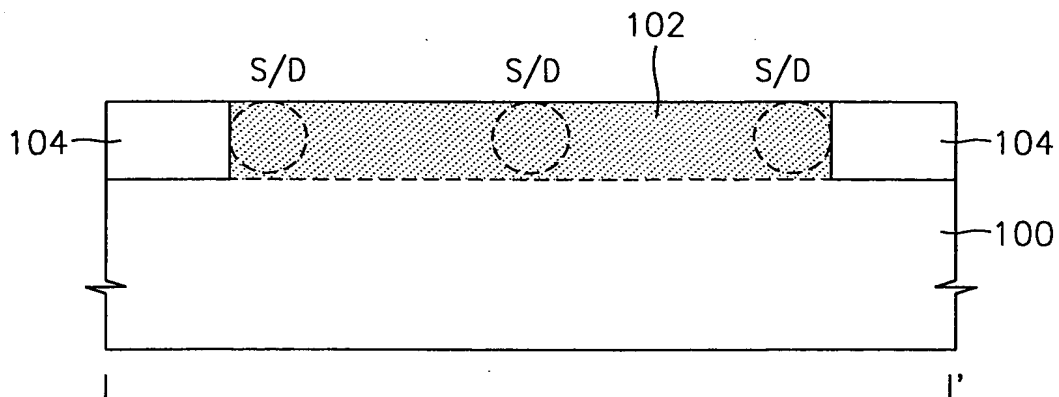


FIG. 2C (PRIOR ART)

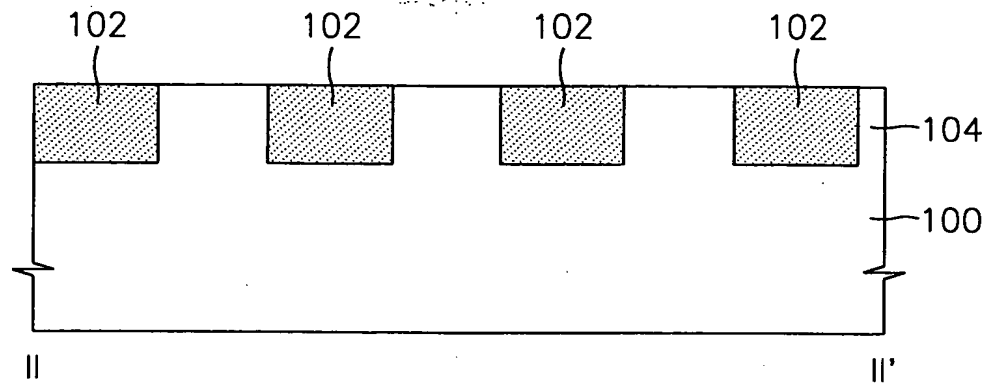
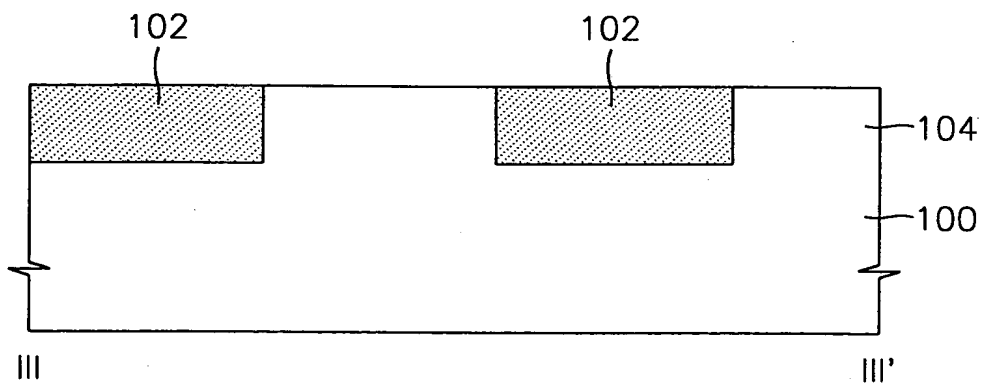


FIG. 2D (PRIOR ART)



This cross-sectional view shows a series of trenches (105) formed in a substrate (100). A layer (104) is deposited over the substrate, filling the trenches. A second layer (112) is deposited over layer 104, and a third layer (118) is deposited over layer 112. The trenches (105) are filled with a material (114) having diagonal hatching, while the regions between the trenches are filled with a material (116) having horizontal hatching. The top surface of the device is flat, and the bottom surface of the substrate (100) is indicated by a dashed line.

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FIG. 3C (PRIOR ART)

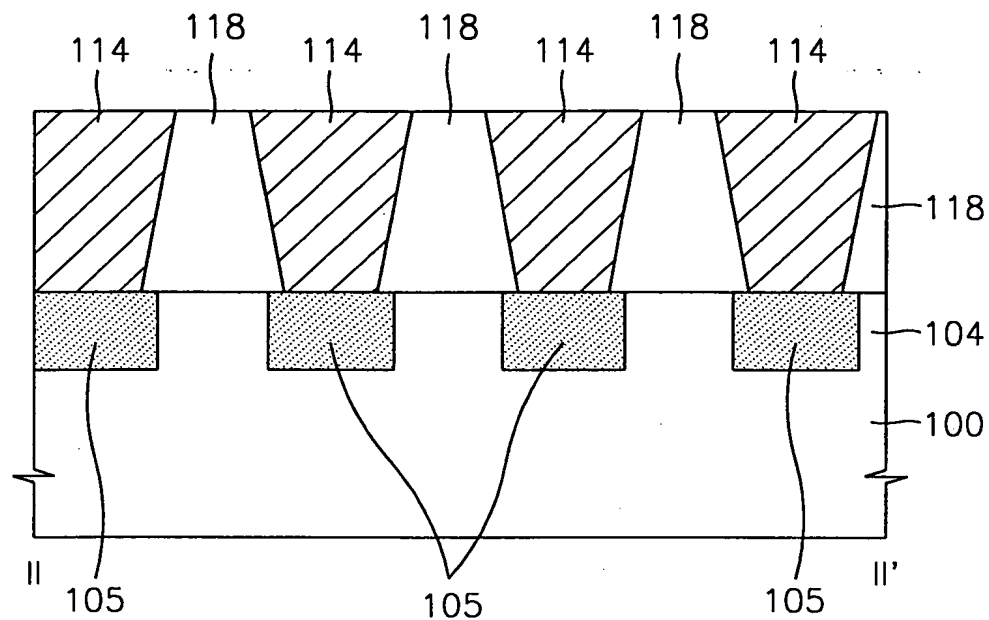


FIG. 3D (PRIOR ART)

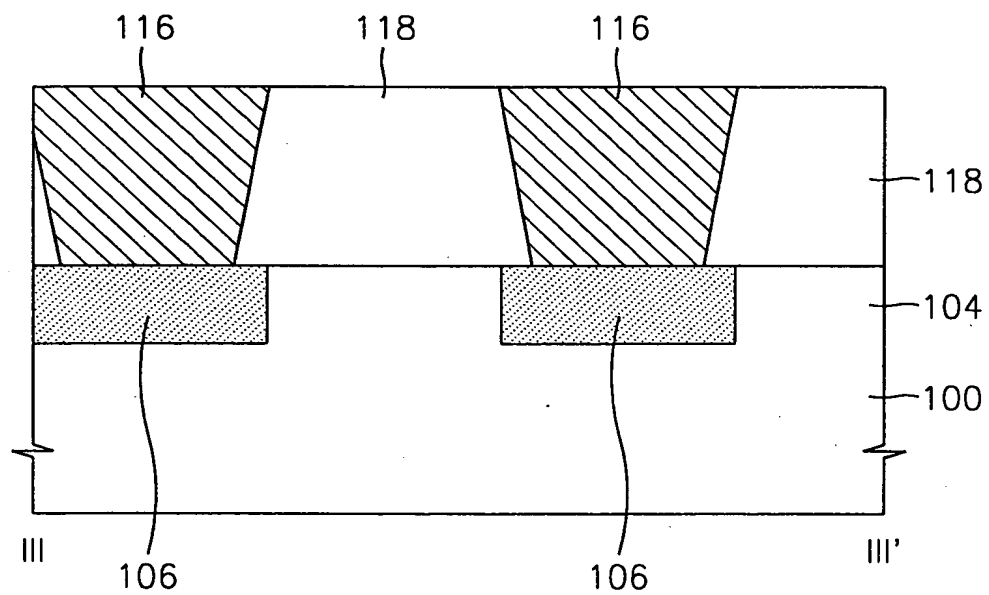
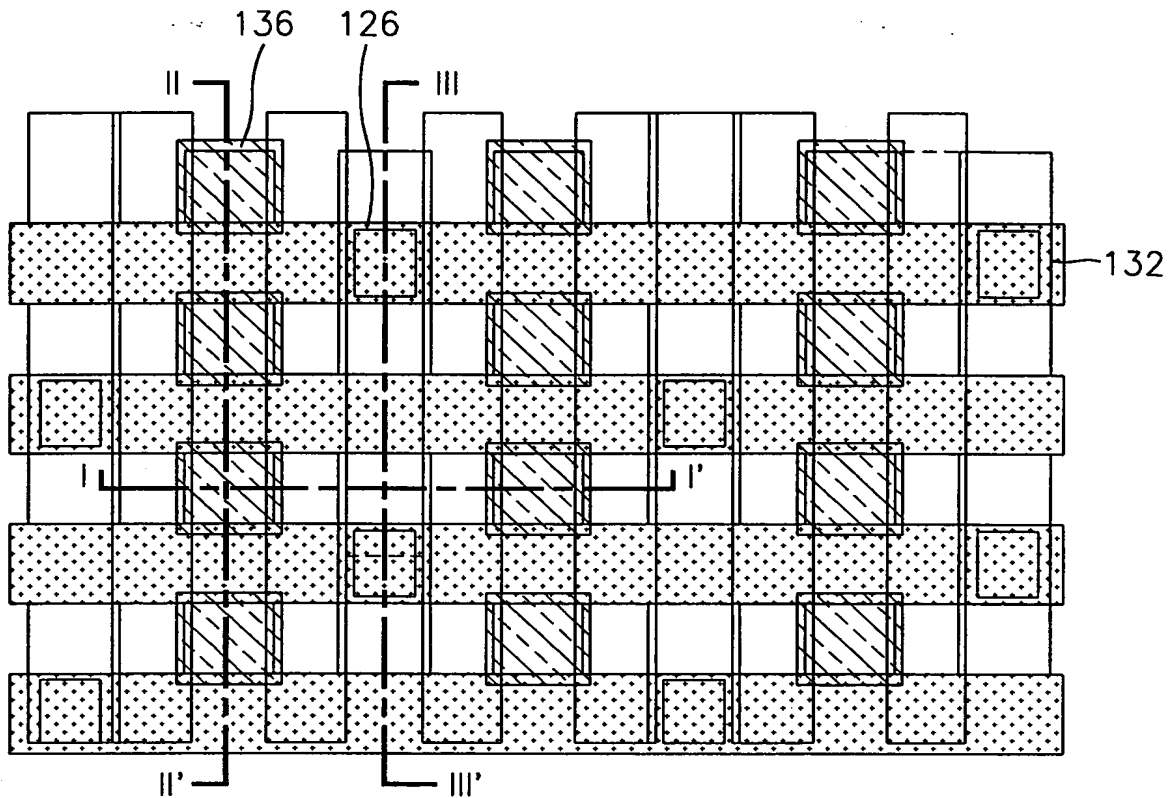
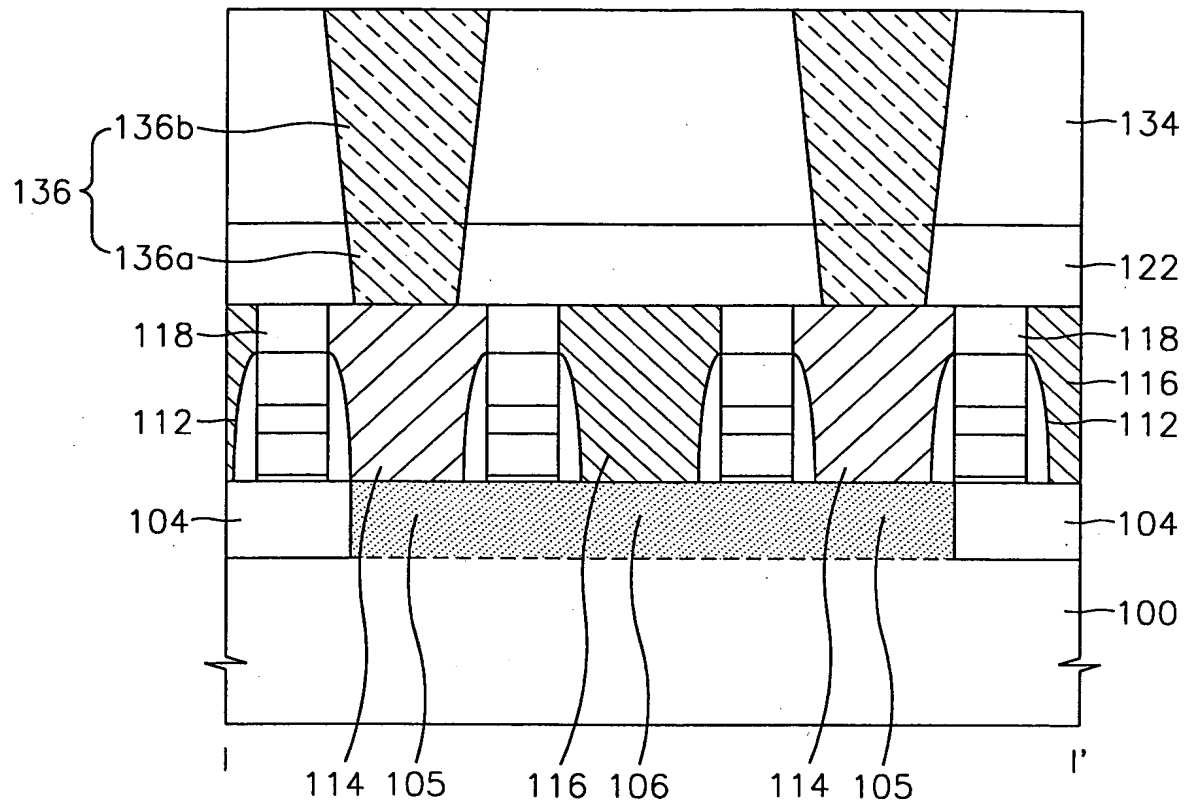


FIG. 4A (PRIOR ART)



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FIG. 4B (PRIOR ART)

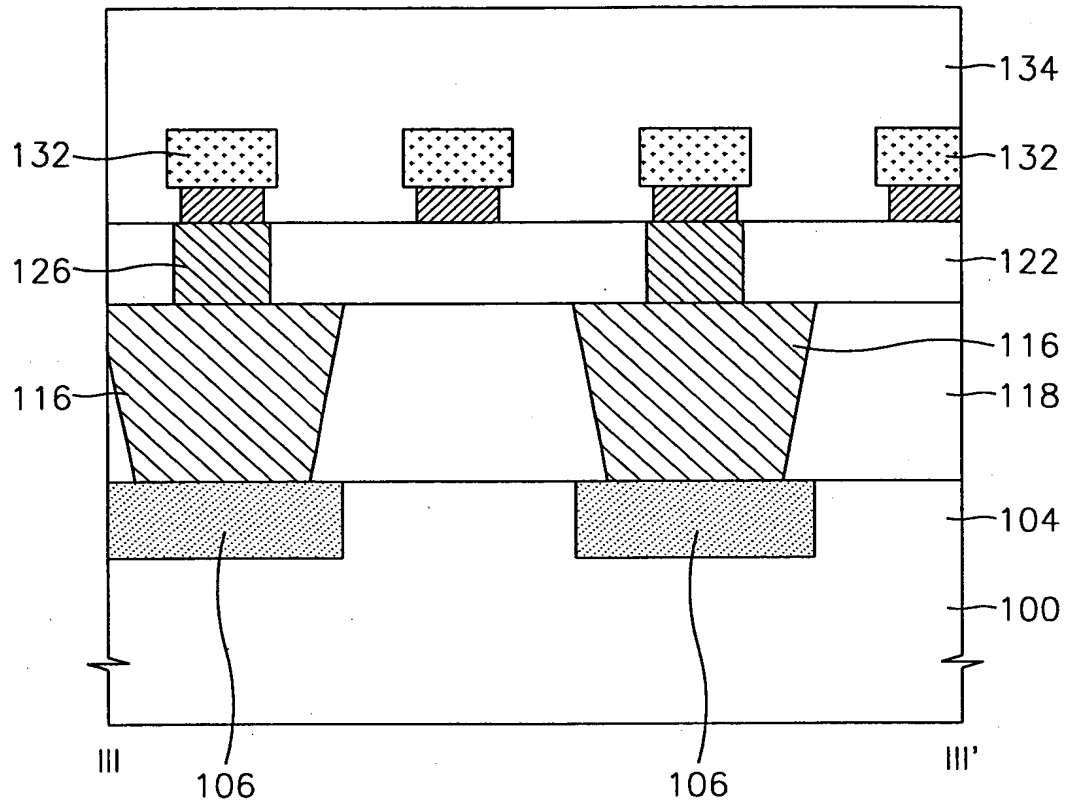


This cross-sectional view shows a semiconductor device with a substrate 100. A gate stack 104 is formed on the substrate, with a gate dielectric 114 and a gate conductive layer 118. The gate conductive layer 118 is tapered, being wider at the top than at the bottom. A channel layer 122 is formed on top of the gate stack. A source/drain region 132 is formed on top of the channel layer, with a source/drain dielectric 136a and a source/drain conductive layer 136b. The source/drain conductive layer 136b is wider than the source/drain dielectric 136a. A contact layer 134 is formed on top of the source/drain conductive layer 136b. The device is shown in cross-section along a line II-II'.



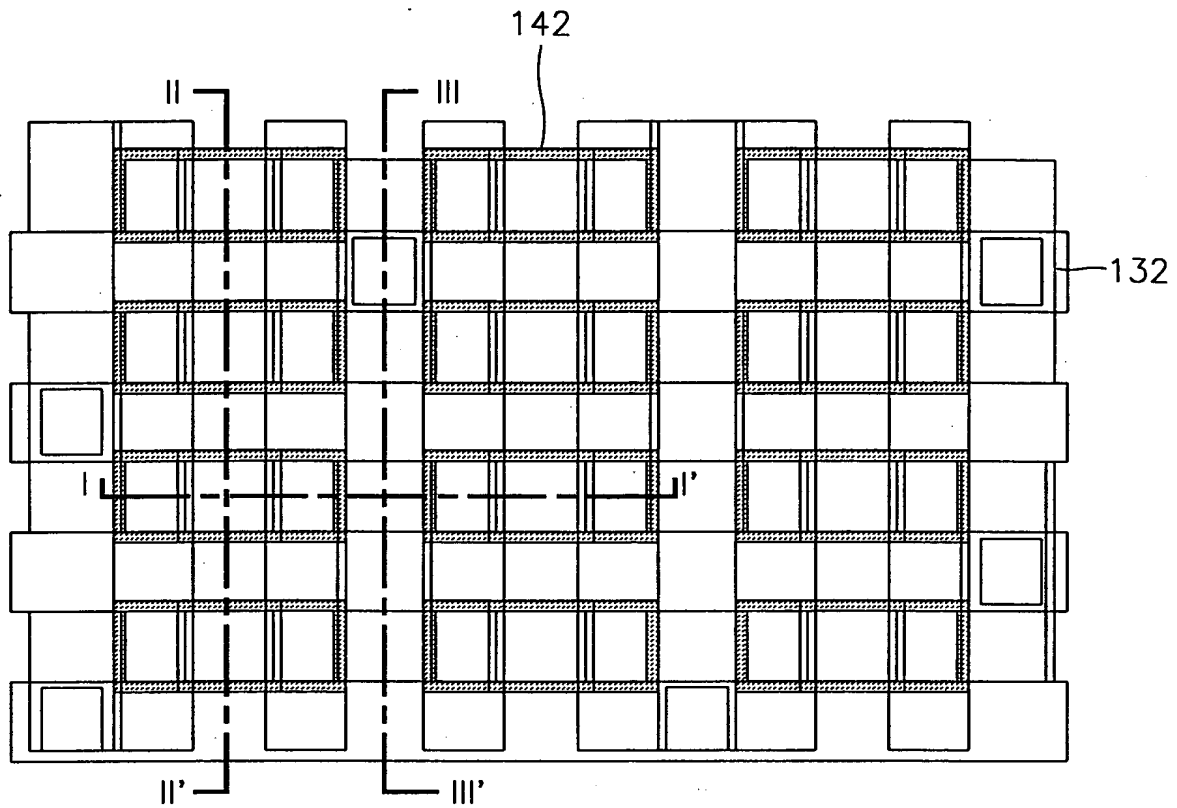
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FIG. 4D (PRIOR ART)



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FIG. 5A (PRIOR ART)





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FIG. 5C (PRIOR ART)

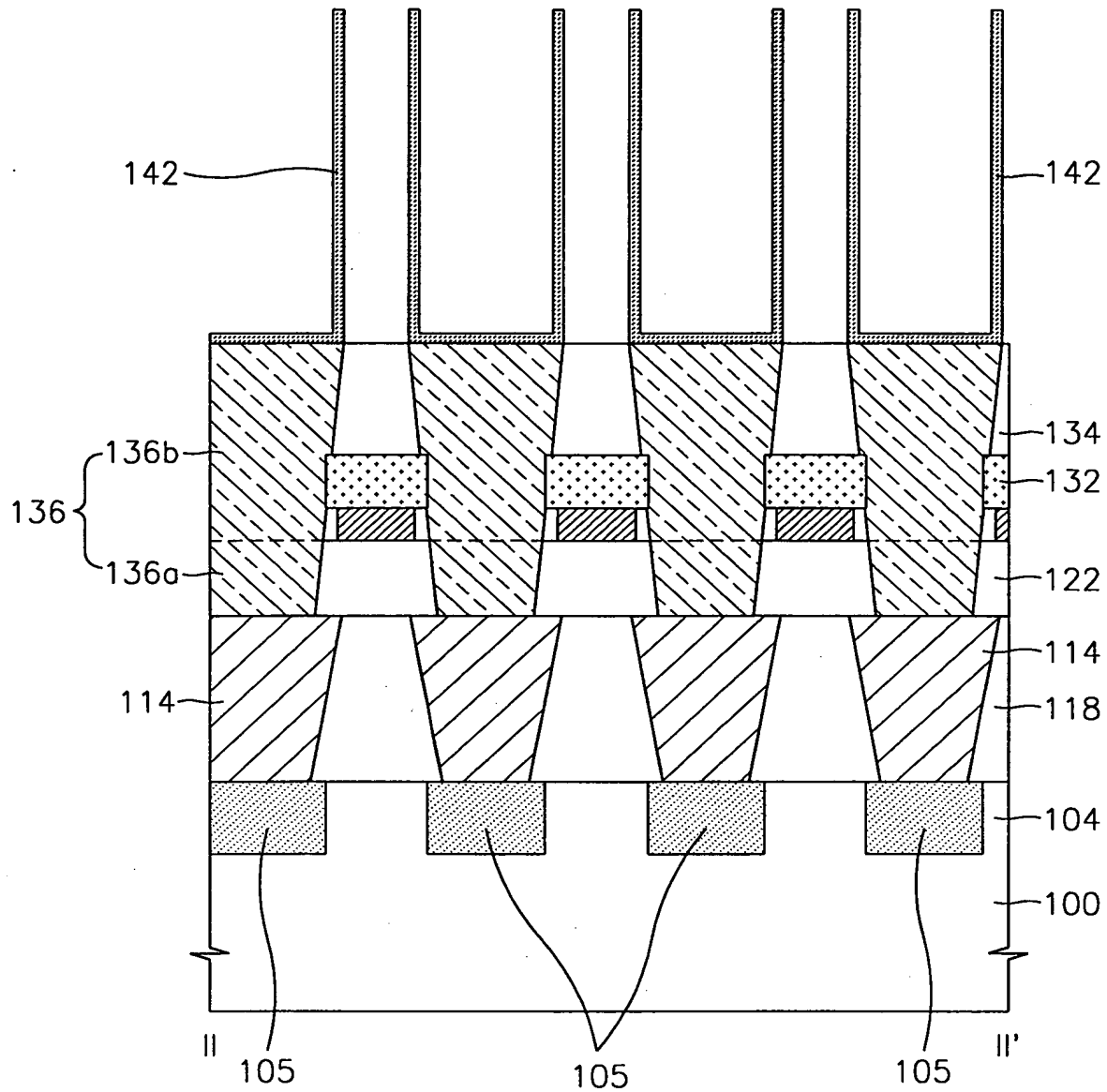
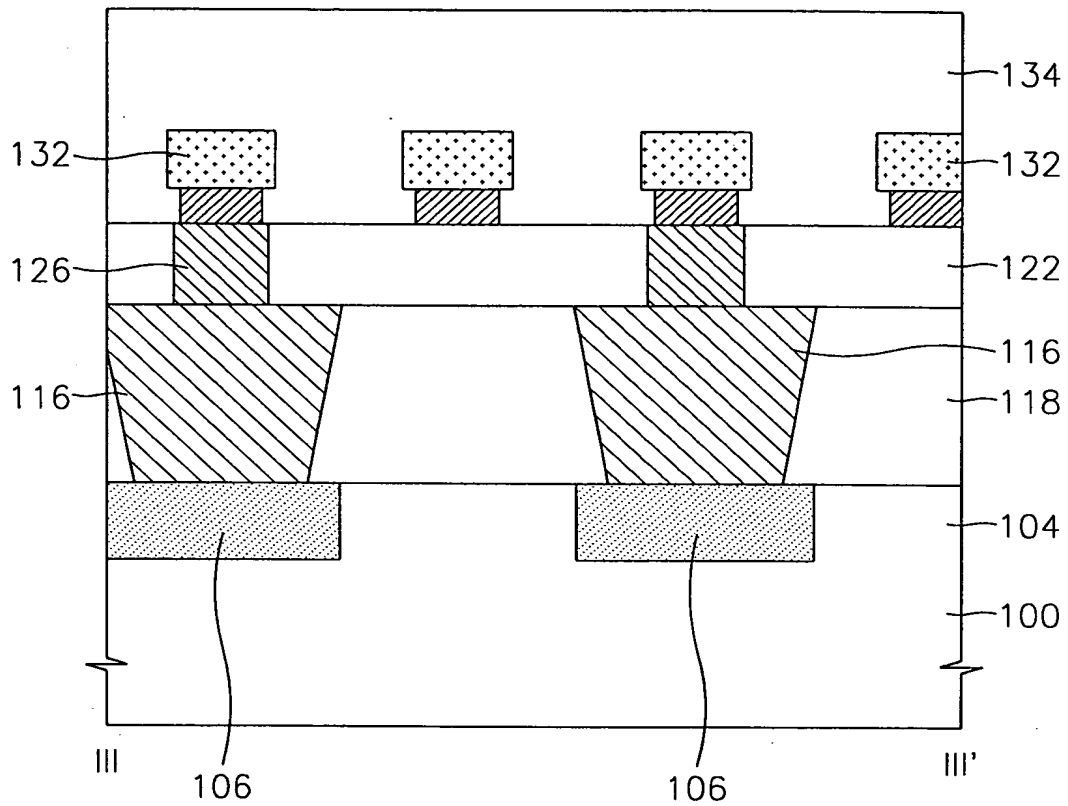


FIG. 5D (PRIOR ART)



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FIG. 6A

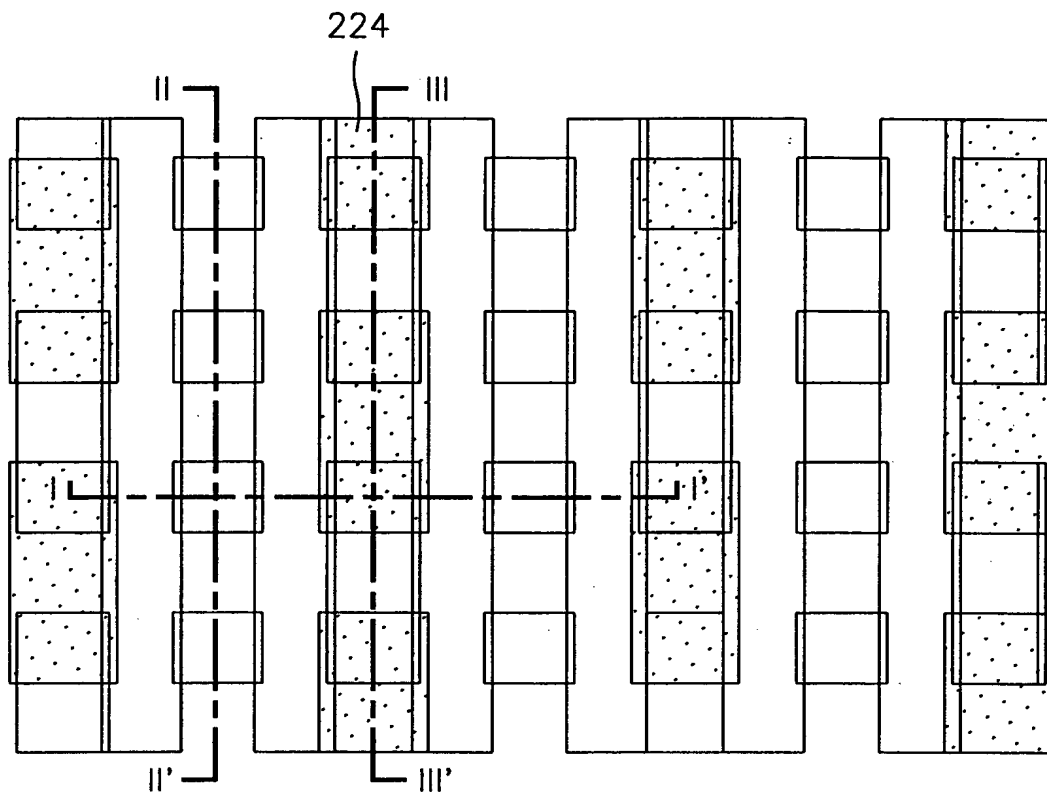
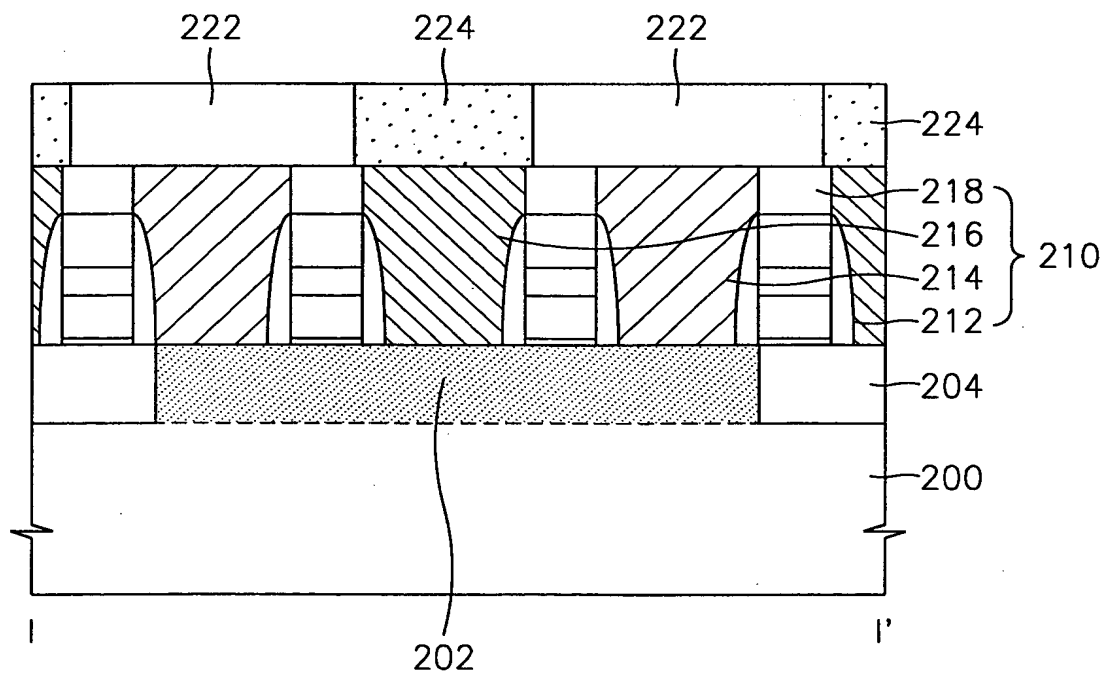


FIG. 6B



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FIG. 6C

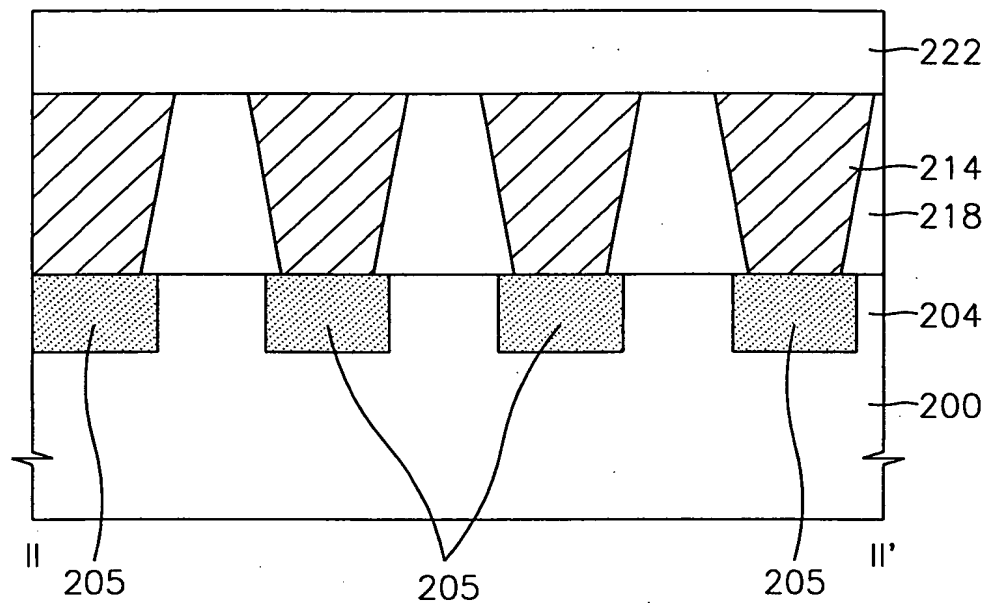
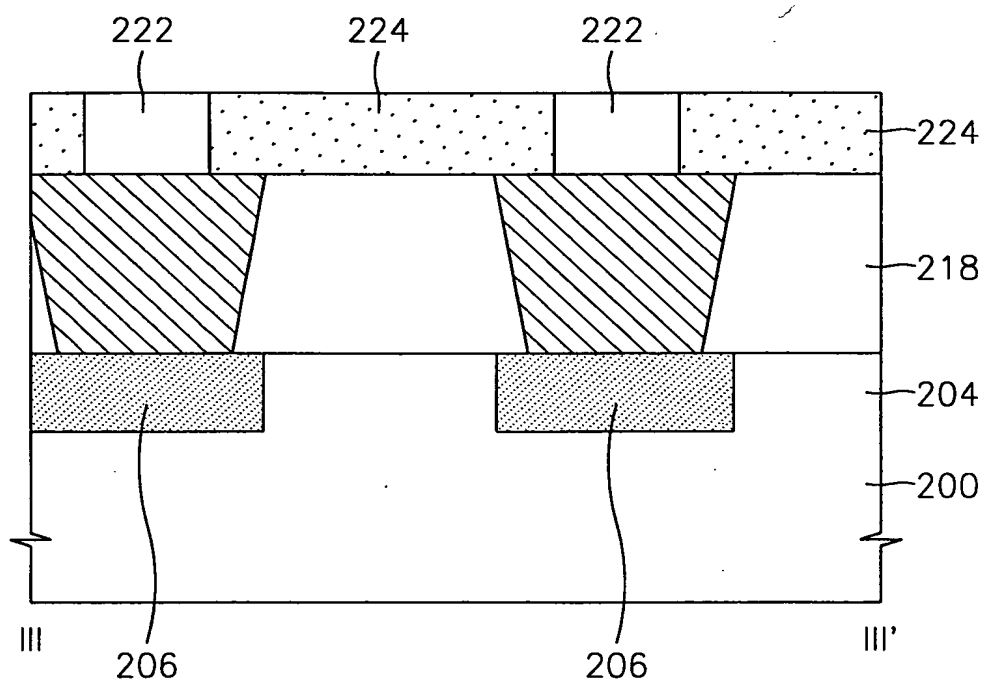


FIG. 6D



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FIG. 7A

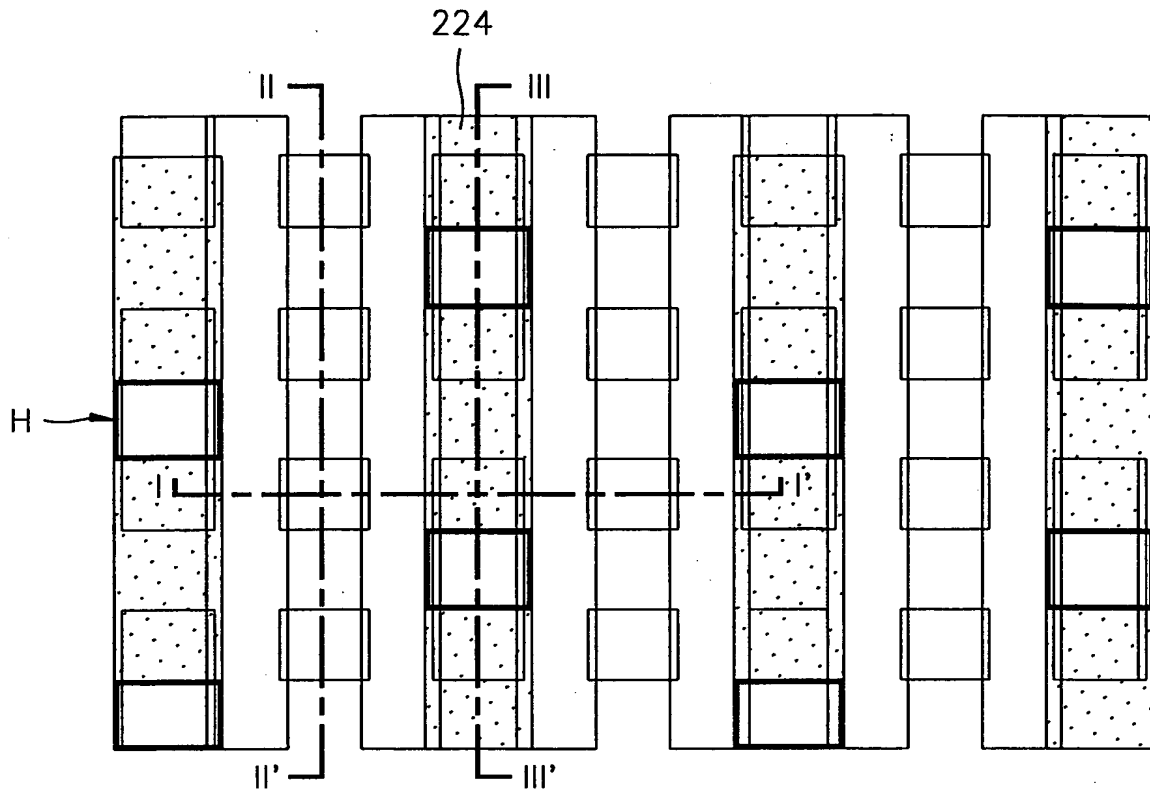
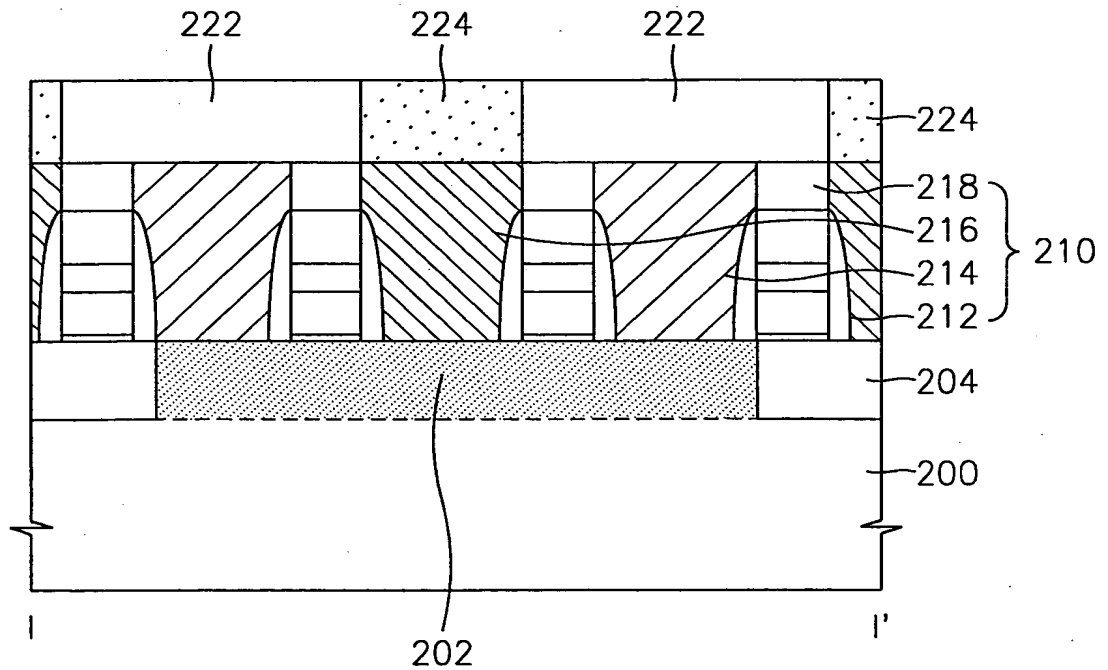


FIG. 7B





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FIG. 7C

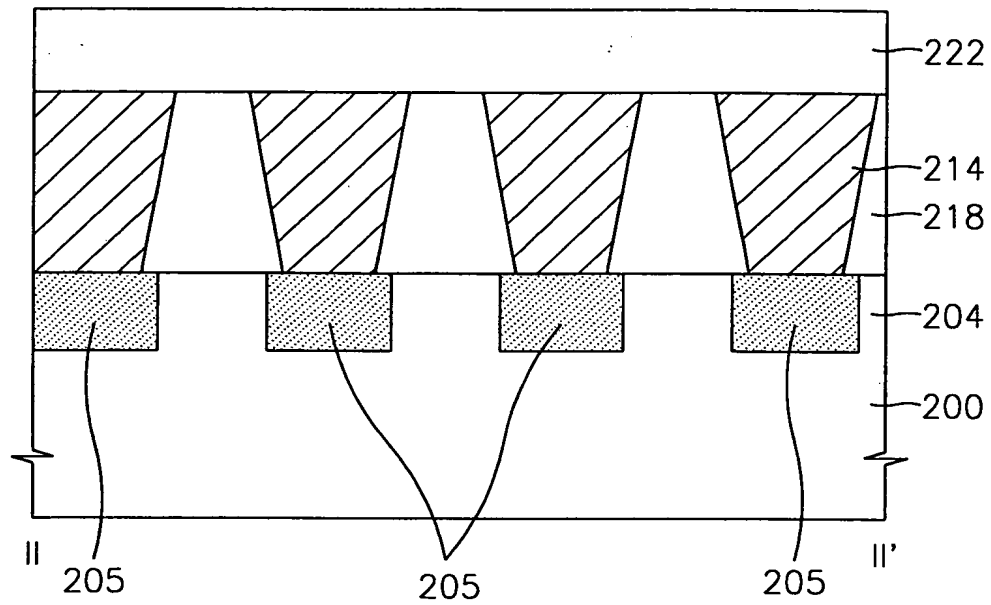
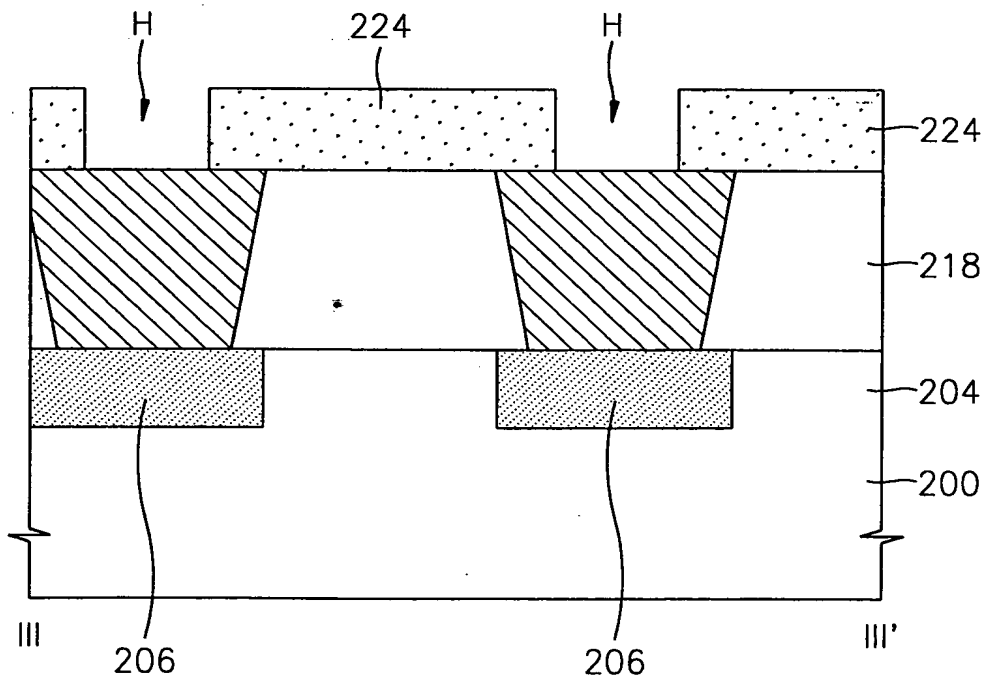
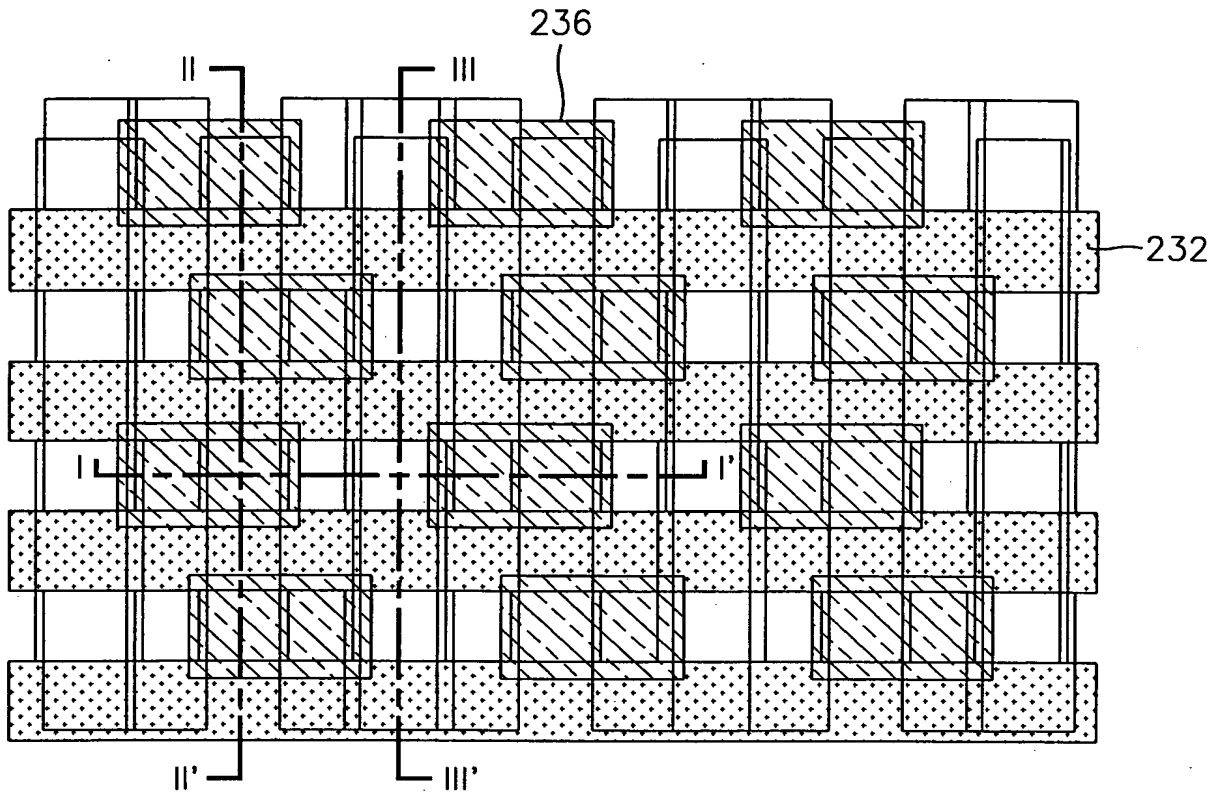


FIG. 7D



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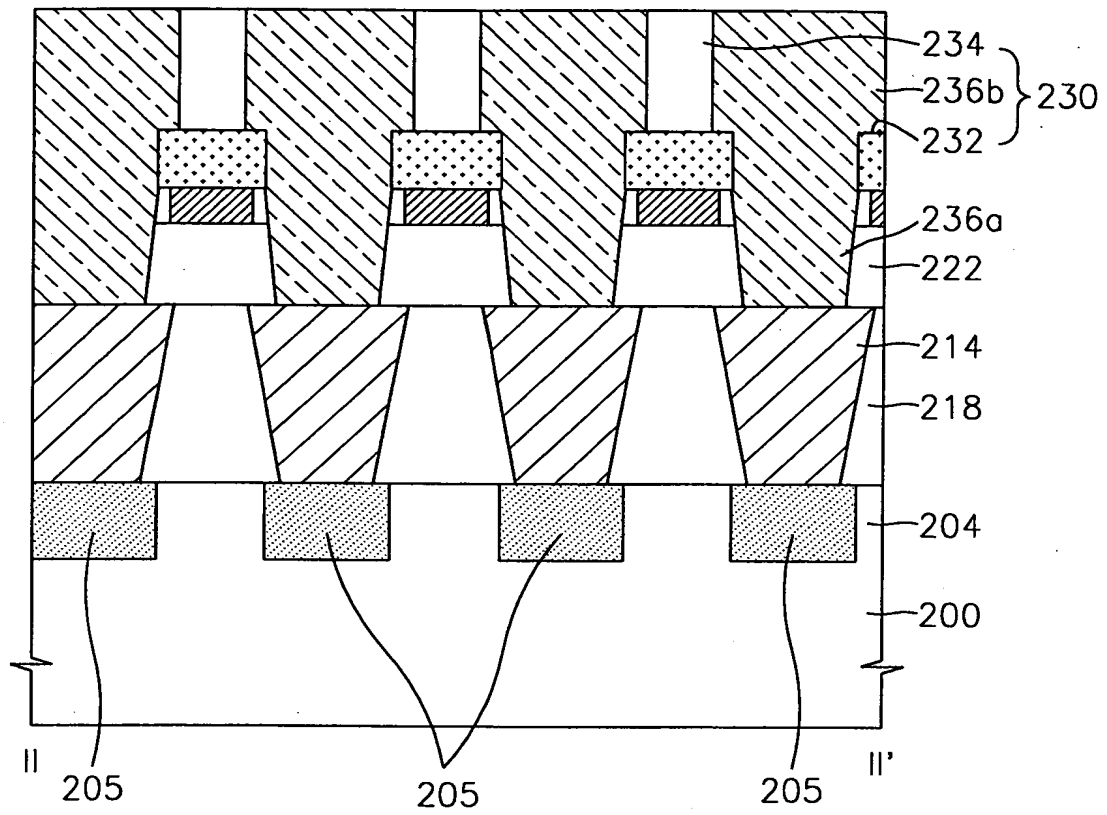
FIG. 8A



This cross-sectional view shows a substrate 200 with a layer 202 on top. A layer 204 is formed on top of 202, containing a central region with a different pattern. Above 204 is a series of vertical structures 210, each consisting of a central core 212 and a surrounding layer 214. A layer 216 is formed on top of 210, and a layer 218 is formed on top of 216. A layer 224 is formed on top of 218, containing a central region with a different pattern. A layer 236 is formed on top of 224, consisting of a central region 236a and side regions 236b. A layer 234 is formed on top of 236. The diagram is labeled with I and I' at the bottom corners.

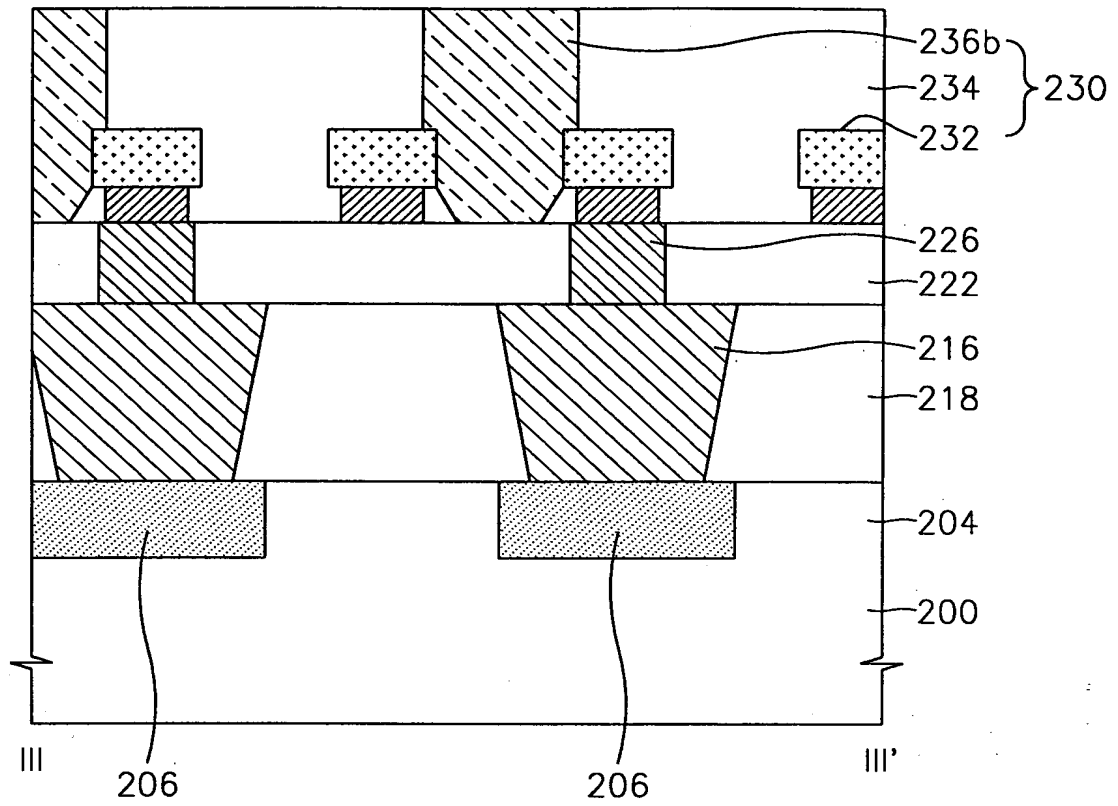
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FIG. 8C



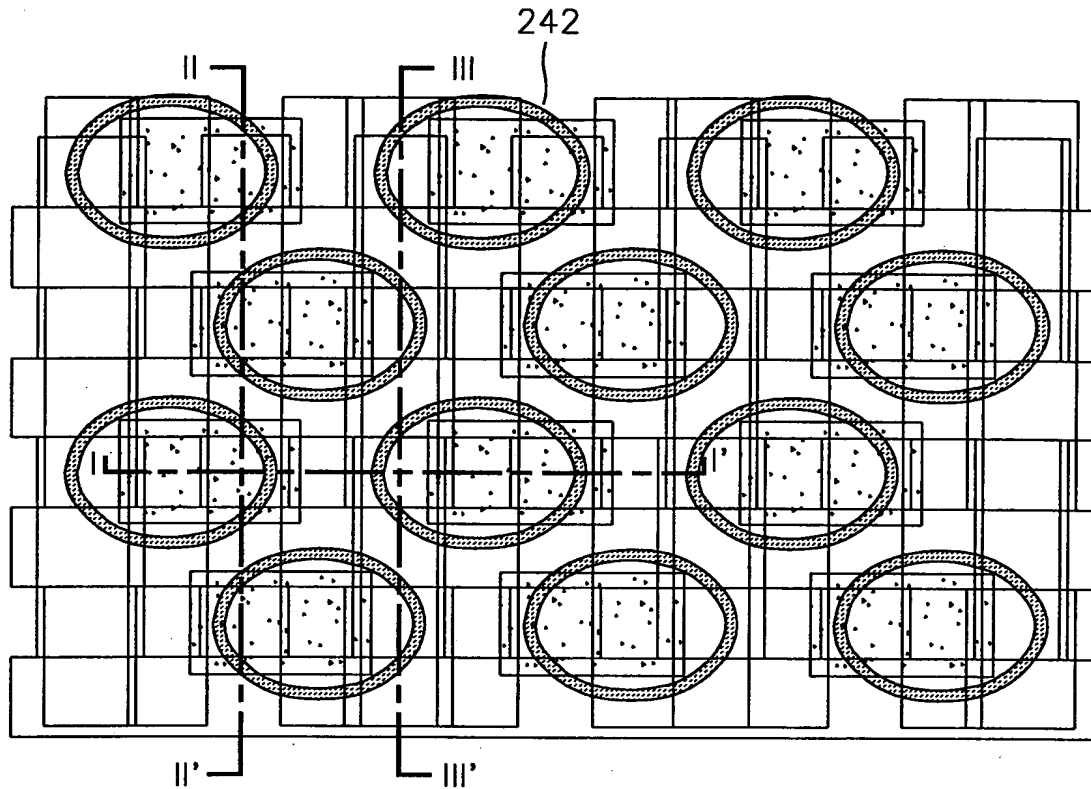
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FIG. 8D



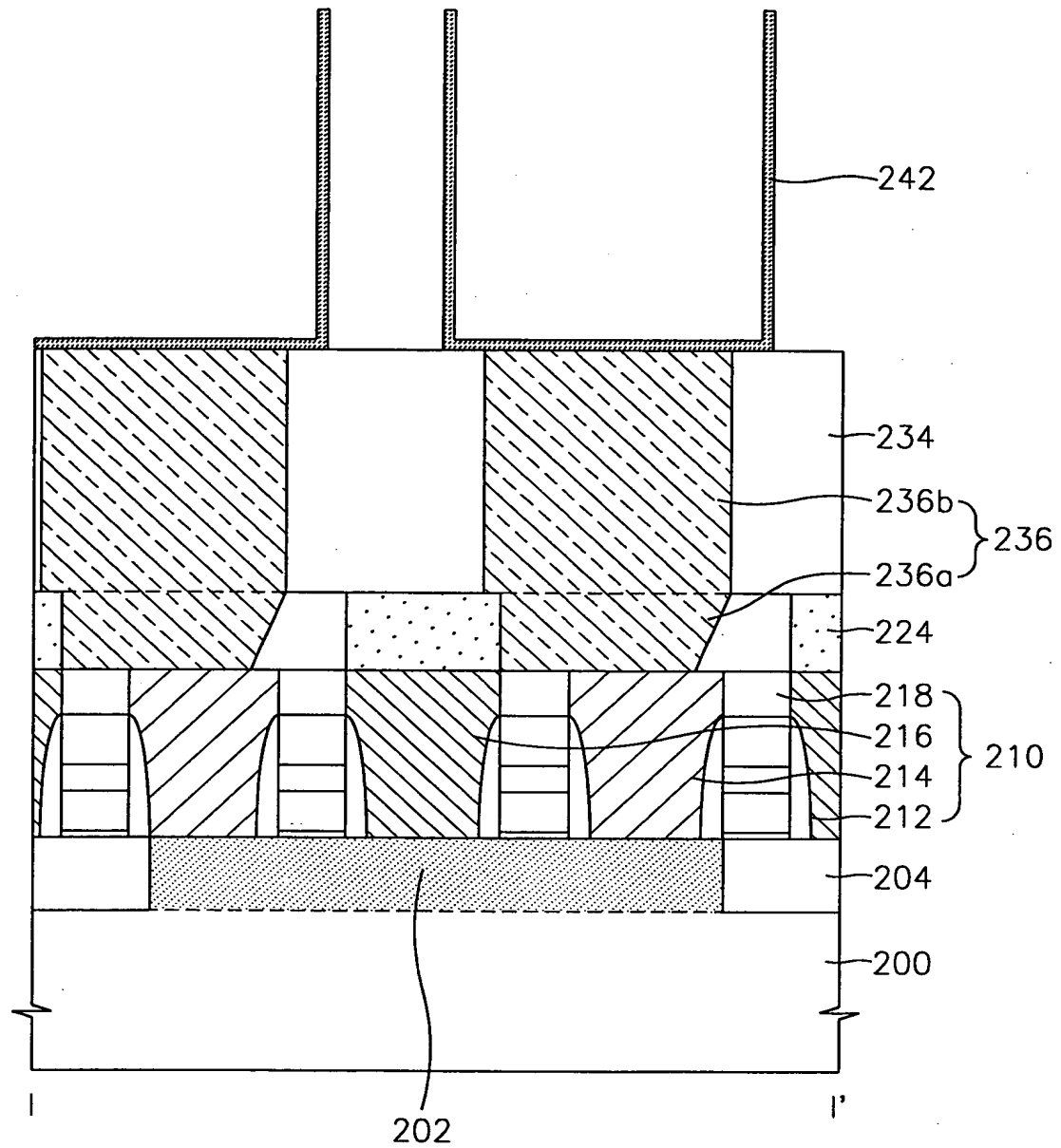
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FIG. 9A



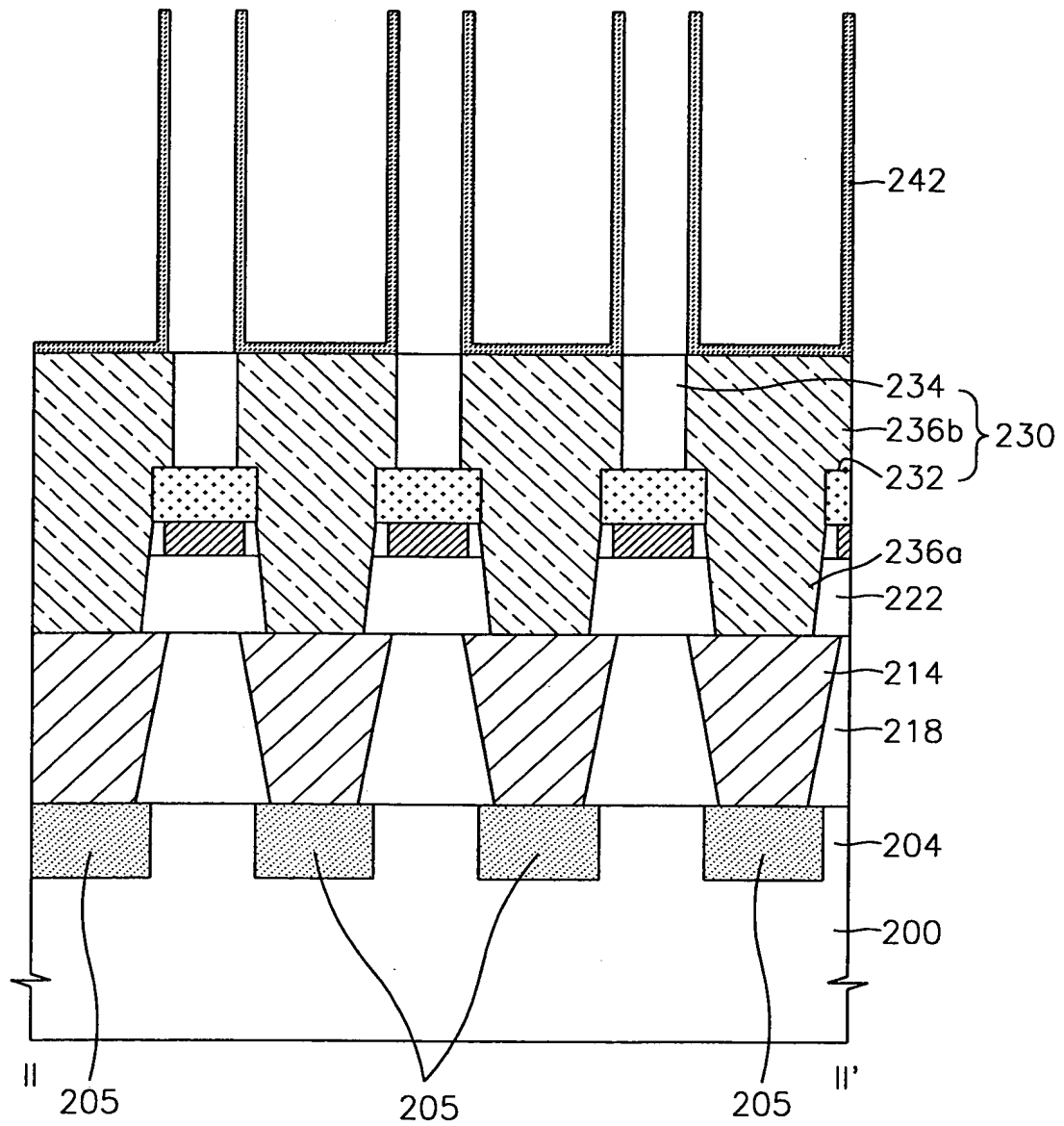
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FIG. 9B



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FIG. 9C





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FIG. 9D

